

Medicine in Perspective

Soviet Health Care System

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Reliable information about the system of health care pertaining to the average Soviet citizen is difficult to come by. The health care offered important officials, artists and foreigners who become ill is at a much more sophisticated level than that available to the general Soviet community. Anecdotal reports¹⁻⁵ depict the personal encounters of Western travelers with the health care system and reflect the preferential treatment given sick foreigners. Some information about the Russian standard of medical care has been gleaned from interviews of Soviet physicians by Western lay correspondents^{1-4,6} and by Western health care professionals.⁷⁻¹¹

This overview of the Soviet health care system resulted from observations made during a recent ten-week stay in Leningrad. The information is taken from personal interviews with physicians and medical students, some of which were conducted on an official basis and others during candid private discussions. Likewise, visits to polyclinics were made on official tours, but also unofficially with Russian friends. This involved accompanying Soviet citizens during spontaneous visits to their local polyclinic, observing first hand the interaction of physicians and patients and touring the facility. In addition, Russian lay people related their personal experiences with the health care system. Between the official accounts, which strove to present the system in the best possible light, and the unofficial information, which pointed out some inadequacies as well as successes, a fairly comprehensive picture emerged with surprisingly few contradictions.

The information presented here pertains only to the medical establishment in Leningrad. The level of sophistication in providing health care may vary according to geographic location in the Soviet Union, as for example rural areas, or Asian Russia.¹² Because Leningrad is the Soviet Union's second largest city, however, it may be safe to assume that health care there represents the Soviet's best efforts.

Medical Education

Every Soviet citizen is required to complete ten years of primary and secondary education beginning at age 6 or 7. Higher education can then be pursued either in a university, specialized institute or a trade school. Following the tenth grade, Soviets begin medical training in special medical institutes. Unlike their American counterparts, Soviet medical schools do not function within a university setting, but rather are individual technical schools. Their mandate is solely to train medical practitioners, and this keeps the medical institutes separate from the more elite Soviet re-

search establishment. There is an entirely different school of medicine for those destined to become pediatricians.

Entrance to a medical institute is difficult. There are competitive examinations involving oral tests in biology and physics (chemistry used to be included). Written essays are required concerning 19th century literature and Soviet literature and a "creative" essay indicative of an applicant's political and patriotic proclivities. According to several young medical students, the system is not without its bias. For example, Jews have a difficult time gaining entrance to a medical institute. Their oral examinations are much more difficult, and on occasion they are given insoluble physics problems to solve. On the other hand, other persons with money or influence seem to have less trouble gaining admission to a medical institute. Some students with poor grades who initially were refused admission can, by using influence, obtain a job for a year or two in a factory. Remedial courses are offered to workers, and after a year or two, that person can be admitted to the medical institute without taking any more competitive examinations. A route less sure than a factory job is to work in a hospital as an orderly. This is a comparatively undesirable job and usually does not eventuate in a place at an institute.

The course of study in both the medical and pediatric institutes is six years. The curriculum is with few exceptions similar to the courses offered in American medical schools. College chemistry, biology and genetics and a language (usually Latin) are offered in the first two years, as are courses in the history and philosophy of the Communist party. Students are taught in the hospitals and polyclinics from the first year, where they learn to interview patients. They are also expected to do janitorial and maintenance work. During the later years students become involved with more formal clinical rotations. Each clinical rotation is preceded by didactic lessons in that discipline.

At the end of six years the students graduate from the medical institute. They spend the following year as interns in residence at a hospital. Medical training is over at the completion of internship, and physicians are obligated to serve another two to three years for the State. Following this, they begin a more permanent medical practice either in a hospital, polyclinic or on an ambulance.

In the Soviet Union each ambulance has a physician on board. Patients too ill to go to a polyclinic can dial an emergency telephone number. An ambulance is dispatched, sometimes after a several-hour wait, and a physician, in effect, makes a house call. He or she can assess the situation and either treat on site or transport the patient to a hospital. Ambulance equipment varies, but usually includes a

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manual respirator and a defibrillator. The physician is generally unfamiliar with the patient's history, and if the patient is transported to a hospital, further care is assumed by the hospital physicians.

Specialty training in the Soviet Union is relatively uncommon and is very different from the American system. There are no specialty boards in the same sense as ours, and there is no specified time or competency requirement. Quite simply, one goes to great lengths to secure a position in a specialized polyclinic or hospital corresponding to the desired specialty. These positions can be impossible to obtain, and often success depends on a physician's proper connections or money. Surgical specialty training is an example. Any physician can do simpler surgical procedures such as an appendectomy or herniorrhaphy. More complicated procedures are done at specialized regional centers and physicians desiring surgical expertise need to find positions at those centers. At the end of 5, 10 and 15 years, respectively, those with more advanced specialty training can take an examination, which certifies them to a successively higher category of expertise. These categories correspond to increments in salary. Actual training time in specialty fields such as cardiology averages three to six months.

Continuing medical education is an area where official and unofficial accounts differ. Officially, continuing medical education courses are given anywhere from once a month to, according to one polyclinic director, four months out of the year. Unofficially, some physicians interviewed admitted attending only one lecture per month at best, and the value of those discussions is dubious. Medical journals exist, but physicians do not generally subscribe to them. Journals are kept in the libraries, but few physicians go there to read them. The apathy with which many physicians approach their work appears to be multifactorial. Medicine is a low status profession in the Soviet Union. The average physician's monthly income is about 145 rubles (\$210), whereas the overall average per capita income in the Soviet Union is 190 rubles (\$275) per month. A physician's pay is the same regardless of the number of patients treated. Medical practice is felt by many to be very routine, nonstimulating and unfulfilling. The work incentive therefore is low, and overall job satisfaction tends to be low.

In the upper echelon of the medical establishment, a professor can earn as much as 500 rubles per month, with added income at inflated rates from private consultations. Private practice is illegal but is widely engaged in by the highly sought-after medical elite. The authorities rarely, if ever, prosecute physicians for accepting private fees; in fact, offering physicians bribes or special favors is a mechanism frequently used by Russians to ensure attentive service.

Polyclinics

The cornerstone of the Soviet health care system is the polyclinic. This is an outpatient facility located in each neighborhood. Services are available with no appointment necessary, and it is always free of charge. There are separate polyclinics for pediatric and adult medicine. The physicians are mostly general practitioners who handle a wide variety of general medical and surgical problems. Patients usually see the same physician at each visit, although they have little choice over which physician they see. The task

of a polyclinic physician is to treat simple problems and to do diagnostic workups on an outpatient basis whenever possible.

A major function of the polyclinics is to assess the ability to work. Patients with major illnesses can be placed on a pension if they are so certified by a physician. Polyclinic physicians routinely grant paid work excuses for anywhere from three days for a minor illness to four months for more serious maladies. Those suffering from tuberculosis receive a ten-month paid work excuse. The mother of a child younger than 14 years who becomes ill is granted a seven-day work excuse, ten days if she is a single parent.

Each polyclinic has a simple laboratory wherein a physician can do microscopic urinalyses, measure hematocrits by sedimentation, study peripheral blood smears and examine specimens of stool, sputum and gastric secretions and vaginal smears. Chemical determinations such as electrolytes can be done only at special regional laboratories, and such tests are rarely ordered. Almost every polyclinic has x-ray equipment, and each year every Soviet citizen is supposed to receive a fluoroscopic chest x-ray examination to screen for tuberculosis and lung cancer. Some Soviet citizens privately admitted to missing many of these yearly examinations. An electrocardiogram is not done on a routine basis and is ordered only if clinically indicated or if a patient is engaged in what is perceived to be a stressful occupation.

When appropriate, polyclinic physicians can refer patients to specialized regional polyclinics for evaluation for particular illnesses. It is in these centers that outpatients can see specialists, and special diagnostic tests such as gastrointestinal series, intravenous pyelography, mammography and M-mode ultrasonography can be done. Angiography is rarely done because of the lack of equipment and expertise in this area. According to the physicians interviewed, computed tomographic and magnetic resonance imaging scanners are virtually nonexistent in the Soviet Union, even in the major medical centers. This is the case at the N.N. Petrov Oncologic Institute in Leningrad, one of the two largest cancer treatment and research centers in the Soviet Union.

Public Health and Preventive Medicine

An important function of the Soviet health care system is preventive medicine. Frequent visits to a polyclinic begin during the neonatal and infant periods. Children are routinely vaccinated against diphtheria, pertussis, tetanus, polio and mumps. They also receive a bacille Calmette-Guérin vaccine, and conversion to positive on a Mantoux test is considered evidence of protection against tuberculosis. Children are sent to "Pioneer" summer camp each year to be exposed to the sunshine and fresh air of the countryside and to be away from what are considered the unhealthy influences of the city. They are examined in a polyclinic when they return from camp, just before starting school.

There are many different public health problems in the Soviet Union. The diet is rich in saturated fats; Russians enjoy fried foods, butter, eggs, cheese and red meat when it is available. Produce is very expensive and difficult to obtain during the winter months. Starches such as bread and potatoes provide a high-caloric density, and obesity is prevalent. Pollution control is grossly inadequate, although the

government is trying to move major industrial plants outside city limits. Despite government claims to the contrary, air and water pollution is obvious. Since the accident at the nuclear reactor at Chernobyl, radioactive contamination of water and food is a potential problem, the magnitude of which is difficult to assess.

Alcoholism is rampant in the Soviet Union, and under the new leadership of Mikhail Gorbachev, a major campaign has been launched in an attempt to control the problem. The sale of alcohol has been limited to specific hours. The price of vodka has skyrocketed, and the lines in stores that sell vodka are formidable even by Soviet standards. Penalties for public drunkenness are severe and may at the very least involve a beating by police. A major internal propaganda campaign against alcoholism is apparent. Still, alcohol rehabilitation programs involving detoxification and counseling as we know them in the West do not yet exist.

Cigarette smoking is widely practiced in the Soviet Union. A health warning is printed on each package of cigarettes, but a grass roots sentiment that it is important or desirable to stop smoking is not evident.

The health care system attempts to have a favorable impact in the workplace. Occupational medicine has brought routine screening examinations to workers at the factories. Food handlers and those working in the bath houses, for example, are screened for enteric and vaginal infections. Those with high-level dust exposure such as factory workers or librarians receive routine chest examinations. As mentioned previously, electrocardiograms are done routinely in those considered to be engaged in stressful occupations.

Therapeutics

The Soviet Union has a rudimentary pharmaceutical industry. Consequently, most of their drugs are imported, usually from other Eastern Bloc nations or from Western Europe, particularly France. Medications can be purchased at a surprisingly low price from the neighborhood *apteka*, or pharmacy, on a nonprescription basis. Medicines are not compounded by a pharmacist, but rather are dispensed by a nurse. Many drugs are in short supply, and it is sometimes necessary to search the city to locate an *apteka* that has the desired medication in stock. Very young children receive medications directly from the polyclinics free of charge.

In addition to the more familiar, a few unconventional therapeutic modalities are offered at polyclinics. One of the more unusual is called electrical therapy. A power supply unit delivers an electrostatic charge to a glass probe. The probe is passed over the diseased part of a patient's body, whereupon a series of electrostatic sparks is administered. The glass probes can be interchanged so that the electrical therapy can be delivered directly into body orifices or topically over skin surfaces. The treatment is considered to be a type of physical therapy, but some physicians privately admitted they have reservations as to its efficacy.

Another type of electrical therapy appears to be similar to the transepidermal nerve stimulator. Electrodes are applied to a patient's skin over a painful area, and an electric current is applied for purposes of analgesia. These units are large and are not battery powered; they are not intended for ambulatory use.

Ultraviolet light therapy is commonly administered to children. It is felt that the poor climate in Leningrad does not afford children enough exposure to sunlight, and this can lead to vitamin D deficiency with subsequent rickets. Milk is not fortified with vitamin D, and vitamin D₃ supplements are apparently not available. The actual incidence of rickets in Leningrad could not be assessed. Acupuncture is popular in the Soviet Union and is a widely practiced treatment modality in the polyclinics.

Glass syringes and reusable needles are the rule in Soviet polyclinics. Examining gloves, urinary catheters and intravenous tubing are also reused. Intravenous solutions are freshly made up and autoclaved in glass bottles, and metal needles are used instead of plastic intravenous catheters. Intravenous infusions, including chemotherapeutic agents, are mixed and administered by nurses rather than physicians or pharmacists.

Emergency rooms as such do not exist in the Soviet Union. During the daytime patients either report to their neighborhood polyclinic or call an ambulance. Several polyclinics in each district remain open 24 hours a day to treat emergencies or mild trauma. Emergency surgical procedures are usually handled expeditiously. Elective operations involve a waiting period; the more complex procedures are done only at regional centers, and these places tend to have longer waiting lists than do the local hospitals, which are equipped to do simpler or more common procedures. Very advanced operations that use high technology, particularly vascular procedures such as coronary artery bypass grafting, carotid endarterectomy and angioplasty, appear to be virtually nonexistent in the Soviet Union for the average citizen. Instead, a large emphasis is placed on physical therapy and rehabilitation following myocardial infarction or stroke.

Many Russian citizens interviewed related that they have little confidence in polyclinic physicians. The prime motivation to visit a polyclinic is often only to obtain a work excuse. This attitude partially stems from a widely held belief that anything one can get for free cannot be good. Adherents to this philosophy usually pay a physician privately. Many people have serious doubts altogether about the ability of the orthodox system of medicine, with its reliance on drug therapy, to treat disease. Consequently, alternative approaches to health care have become popular. Homeopathy is one such approach, and a homeopathic hospital operating on a fee-for-service basis flourishes in Leningrad. Chiropractic has not caught on yet, but herbal medicine has. This is referred to as *trava*, which literally means "grass." Popular folklore concerning grasses, herbs, mushrooms, roots and other natural products with reputed medicinal properties is handed down either by elderly women from the countryside who are knowledgeable about such matters or more recently in books and periodicals. *Trava* in its various forms can be gathered in the forests or countryside, and some are available even in an *apteka*.

Ironically, in a purportedly atheistic country such as the Soviet Union, faith healing and "psychic healing" have a number of proponents, particularly in the more rural areas.

Conclusion

Soviet health care would have to be considered somewhat behind Western standards. The advanced medical

technology that has arisen in the West in recent decades has never become a part of the Soviet system. More specifically, medical intensive care units, hemodynamic monitoring, vascular and microsurgical techniques and computerized diagnostic modalities—to name a few—have not become a routine part of Soviet medical care. Because of this, ordinary physicians have less to cope with in terms of the proper use of these systems, and one year of post-graduate medical training appears to suffice. The situation is reminiscent of that in the United States after World War II before the age of specialization.

Soviet medicine is best assessed by comparing it with its past, and not by comparing it with present-day Western standards of care. In this regard, the Russians are proud of its steady improvement. The emphasis in the Soviet Union is on providing universally available free medical care, and, at least in Leningrad, this appears to have been achieved. To be sure, the health care system seems to suffer from many of the same ills as the rest of Soviet society, such as low work incentive, poor productivity, corruption and

elitism. But overall, the Soviet physicians interviewed seemed to be pleased with the quality of care provided, and most felt that the system is adequate to meet the needs of their people.

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